

WHAT IS CLAIMED IS:

1. A method comprising the steps of:
forming a key management message operation-code field;
forming a length field;
5 forming a control field;
forming a target destination field including a target destination identifier;
forming a key management message field;
forming a CRC field;
forming a key management message frame including, in sequence, the
10 operation-code field, length field, control field, target destination field, key
management message field, and CRC field; and
receiving, by a key delivery device, the key management message frame.
2. The method of claim 1, further comprising
15 forwarding, by the key delivery device, the key management message
frame to a target communication device identified in the target destination field.
3. The method of claim 1 wherein the key delivery device comprises a key
variable loader.
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4. The method of claim 1 wherein the target communication device
comprises one of a mobile radio, portable radio, digital interface unit, encryption
management controller, and radio network controller.
- 25 5. The method of claim 1 wherein the step of forming a key management
message frame is accomplished by a key management facility, the method
including the step of sending the key management message frame from the key
management facility to the key delivery device.

6. The method of claim 1 wherein the key management message field is a variable length field.

7. The method of claim 1, wherein the target destination field of the key management message frame includes a first target destination ID associated with a key delivery device, and wherein the key management message field of the key management message frame includes a second target destination ID, the method comprising:

5 sending the key management message frame to the key delivery device;
10 determining, by the key delivery device, a target communication device associated with the second target destination ID.

8. The method of claim 7 wherein the key management message field includes an encrypted key management message including the second target destination ID, the step of determining a target communication device comprising:

15 decrypting the encrypted key management message, yielding a decrypted key management message; and
determining the target communication device identified in the decrypted key management message.

20 9. The method of claim 8, wherein the target communication device identified in the decrypted key management message differs from the key delivery device, the method further comprising the step of forwarding the decrypted key management message from the key delivery device to the target communication device identified in the decrypted key management message.

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10. A method comprising the steps of:
forming a key management status message operation-code field;
forming a status field;
5 forming an RSI field;
forming a CRC field;
forming a key management status message frame including the key
management message status operation-code field, the status field, the RSI field
and the CRC field; and
10 receiving the key management status message frame by one of a key
delivery device and a target communication device.

11. A method of exchanging messages between a key delivery device and
a target communication device according to a protocol using a number of
15 predefined operation-codes, the method comprising the steps of:
(a) sending, from the key delivery device to the target communication
device, a first operation-code requesting the target identify whether it recognizes
the protocol;
(b) sending, from the target communication device to the key delivery
20 device, a second operation-code identifying if the target recognizes the protocol;
and
(c) sending, from the key delivery device to the target communication
device, a key management message frame including
a key management message operation-code field;
25 a length field;
a control field;
a target destination field including a target destination identifier;
a key management message field; and
a CRC field; and

(d) sending, from the target communication device to the key delivery device, a fourth operation-code responsive to the key management message frame.

12. In a communication system including a key delivery device and a number of encryption devices, a method comprising the steps of:

5 receiving, by the key delivery device, one or more key management messages including indicia of respective target communication devices that are to receive the key management messages;

operably connecting the key delivery device to one or more candidate encryption devices;

10 determining, by the key delivery device upon connecting to the one or more candidate encryption devices, which ones of the candidate encryption devices are target encryption devices; and

delivering, from the key delivery device, one or more key management messages to the candidate encryption devices determined by the key delivery device to be target encryption devices.

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13. The method of claim 12 further comprising the steps of:

determining, by the key delivery device upon connecting to the one or more candidate encryption devices, which ones of the candidate encryption devices are not target encryption devices; and

20 not delivering key management messages to the candidate encryption devices determined by the key delivery device not to be target encryption devices.

14. The method of claim 12 further comprising the step of displaying, by the key delivery device upon a successful delivery of a key management message to a target encryption device, a message indicative of the successful delivery of the key management message to the target encryption device.

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15. The method of claim 12 further comprising the step of displaying, by the key delivery device upon an unsuccessful delivery of a key management message to a target encryption device, a message indicative of the unsuccessful delivery of a key management message to the target encryption device.

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16. The method of claim 12, wherein the step of receiving one or more key management messages comprises receiving an encrypted key management message to be delivered in red transfer to target mode, the method comprising:

10 decrypting the encrypted key management message, yielding an unencrypted key management message including a target destination identifier; and

delivering the unencrypted key management message to a target communication device corresponding to the target destination identifier.

15 17. The method of claim 12, wherein the step of receiving one or more key management messages comprises receiving an encrypted key management message to be delivered in black transfer to target mode, the method comprising:

determining a target destination identifier associated with the encrypted key management message; and

20 delivering the encrypted key management message to a target communication device corresponding to the target destination identifier.

18. The method of claim 17, wherein the step of receiving an encrypted key management message comprises receiving a key management message frame including a key management message field and a target destination field, the key management message field including the encrypted key management message and the target destination field including an encrypted target destination identifier, the step of determining a target destination identifier being accomplished by decrypting the encrypted target destination identifier.

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